

REMARKS

Claims 1, 2, 4, 7, and 30-43 remain in the application. Applicants note with appreciation the Examiner's indication that claims 1, 2, 4, 7, and 30-39 are allowed.

The sole remaining issue in this case is the rejection of claims 40-43 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 5,418,802 to Chwalck. This rejection is again respectfully traversed.

In the previous amendment, claim 40 was amended to recite "establishing a Bragg grating within the optical path with a plurality of electrodes positioned to perturb an effective index of refraction a plurality of times along a direction of propagation through the optical path" (emphasis added).

It is respectfully submitted that Chwalck fails to disclose establishing a Bragg grating using electrodes. Rather Chwalck discloses the Bragg grating reflector 7 (Figure 2A) is produced by first forming a periodic masking layer with photoresist exposed by standard holographic techniques and then using standard ion-milling to remove material in the unmasked regions. An alternative method for producing a Bragg grating reflector involves the deposition of a thin film layer of an optically transparent material on the surface of the LiNbO₃ wafer where then a periodic masking layer is formed and etched as described above. See column 5, lines 20 et seq.

Accordingly, Chwalck discloses creating or establishing the Bragg

reflector 7 using fabrication techniques such as deposition and etching.

Accordingly, Bragg reflector 7 disclosed in Chwalck is a pre-existing grating fabricated into wafer 5, not a Bragg grating established by perturbing an index of refraction using electrodes.

Further, Chwalck fails to disclose using a plurality of electrodes to perturb an effective index of refraction a plurality of times along a direction of propagation through an optical path. Instead Chwalck discloses that electrodes 8 and 9 are positioned to establish “uniform electric fields” within the intersection of Bragg reflector 7 and channel waveguide 4. Figures 2A and 2B of Chwalck shows three electrodes 11, 12, and 13 running parallel above channel waveguide 4. Since electrodes 11, 12, and 13 run parallel with the propagation direction through channel waveguide 4, as opposed to cutting across channel waveguide 4, electrodes 11, 12, and 13 are not positioned to perturb an effective index of refraction multiple times along a direction of propagation through channel waveguide 4 as shown in Applicant’s Figure 5 and as recited in claims 40-43.

MPEP § 2131 mandates that "TO ANTICIPATE A CLAIM, THE REFERENCE MUST TEACH EVERY ELEMENT IN THE CLAIM".

Furthermore, the MPEP, citing Richardson v. Suzuki Motor Co., 9 USPQ2d 1051, 1053 (Fed. Cir. 1987), states "[t]he identical invention must be shown in as complete detail as is contained in the... claim" (emphasis added).

Here, the prior art of record does not show, teach or suggest “establishing

a Bragg grating within the optical path with a plurality of electrodes positioned to perturb an effective index of refraction a plurality of times along a direction of propagation through the optical path" (emphasis added), as claimed.

It is therefore respectfully submitted that the rejections to the claims are improper under § 102 as Chwalck cannot anticipate the rejected claims since it does not "teach the identical invention". Based on the above discussion with reference to the MPEP guidelines, it is respectfully requested that the rejections based on 35 U.S.C. § 102 be withdrawn.

This being the only rejection to claims 40-43 it is respectfully requested that these claims be allowed along with already allowed claims 1, 2, 4, 7, and 30-39 and that the application be passed to issue. Please charge any shortages and credit any overcharges to Intel's Deposit Account number 50-0221.

Respectfully submitted,

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